

Application No.: 10/763,391

AMENDMENTS TO THE CLAIMS:*Please amend the claims as follows:***Claim 1 (currently amended):** A sheet handling apparatus comprising:a transport path that transports sheets to or from a deposit/drawal deposit/withdrawal part

a detection part that detects a characteristic of a sheet transported by the transport path,

an amplifier that amplifies a signal obtained from the detection part;

an A/D converter that converts an analog signal amplified in the amplifier to a digital signal;

determining means that determine the truth of the sheet, an unidentified sheet that has the characteristic of a true sheet but is out of a range of a permissible error, and denomination of the sheet, by use of the signal having been produced as a result of A/D conversion by the A/D converter in reference to predetermined conditions; and

a control part that changes a condition of signal read accuracy of the detection part according to a result of determining the truth of the sheet in the determining means,

wherein in a state of the digital signal being within a range of an inputted voltage for the A/D converter, if the sheet is determined as the unidentified sheet as the result of determining the truth of the sheet in the determining means, the control part changes the condition of the signal read accuracy by means of changing a range of the inputted voltage corresponding the denomination of the unidentified sheet ~~a setting of conditions so that an accuracy to determine the sheet becomes higher when the sheet was determined as unidentified~~, and transports through the transport path ~~[[an]]~~ the unidentified sheet determined as unidentified to the detection part again and the detection part detects the unidentified sheet again under the changed condition and the determining means determines again the truth of the unidentified sheet by using the digital signal being obtained according to said changed condition performs the truth determination again under the changed conditions in the determining means.

Claim 2-4 (Cancelled)

Application No.: 10/763,391

Claim 5 (Currently amended): The sheet handling apparatus according to claim [[3]] 1, wherein the control part sets conditions so as to narrow the range between [[the]] an upper limit value and [[the]] a lower limit value of the A/D converter.

Claim 6 (Cancelled)

Claim 7 (Currently amended): A method of determining bills for improving capacity of determination of bills in a bill handling apparatus, comprising the steps of:

transporting through a transport path a bill to be deposited to a determining part of the bill handling apparatus to perform determination;

detecting characteristics of the bill by a detection part of the bill handling apparatus;

processing a digital signal from the detection part and determining a denomination and truth of the bill in a determination part of the bill handling apparatus;

as a result of the truth determination, classifying the bill into one of at least four types of bills to process the bill, the four types of bills being true bills determined as true, false bills lacking characteristics indispensable to true bills, unidentified bills having characteristics indispensable to true bills but exceeding a permissible error thereof, and undefined bills the denominations of which cannot be determined;

if the bill is determined as an unidentified bill, changing an amplification factor or resolution of the detection part a condition of the signal read accuracy by means of changing a range of an inputted voltage for an A/D converter responsive to the detection part corresponding to the denomination of the unidentified bill so as to increase accuracy to determine the bill; and

after the change, transporting the unidentified bill through the transport path to the detection part again and detecting characteristics of the unidentified bill again under the changed condition and detecting again the truth of the unidentified bill by using a digital signal being obtained according to said changed condition to detect the characteristics of the bill to perform the truth determination under changed conditions of the amplification factor or resolution of the detection part in the determining part.

Claim 8 (Cancelled)

Application No.: 10/763,391

Claim 9 (Currently amended): The determination processing method according to claim 7, wherein, as a result of the truth determination, ~~the~~ the undefined bill is returned through the transport path to a user, a bill determined as an unidentified bill and a bill determined as a false bill in another determination are stored in a storing chamber of the bill handling apparatus, and a bill determined as an undefined bill in yet another determination is returned through the transport path to the user.

Claim 10 (Currently amended): A sheet handling apparatus, comprising:
a transport path that transports sheets to or from a deposit/drawal ~~deposit/withdrawal~~ part;
a determining part that determines the truth of sheets, unidentified sheets that have the characteristic of a true sheet but are out of a range of a permissible error, and denomination of the sheets, transported by the transport path;

a control part that changes a condition of a signal read accuracy to determine the sheets in the determining part; and

a stocking part that temporary temporarily holds sheets determined as unidentified in the determining part.

wherein in a state of a digital signal converted from an analog signal by a A/D converter being within a range of an inputted voltage for the A/D converter, if the sheets are determined as the unidentified sheets in the determining part, the control part changes the condition of the signal read accuracy by means of changing a range of the inputted voltage corresponding to the denomination of the unidentified sheets ~~a determination condition so as to increase the determination accuracy of the determining part,~~ and transports through the transport path the unidentified sheets determined as unidentified from the stocking part to the determining part again and a detection part detects the unidentified sheet again under the changed condition and the determining part determines again the truth of the unidentified sheets by using the digital signal being obtained according to said changed condition to determine the truth of the sheets under a changed condition of the accuracy in the determining part.

Claim 11 (Cancelled)

Application No.: 10/763,391

Claim 12 (original): The sheet handling apparatus according to claim 10, wherein the sheet handling apparatus includes a storing part that stores contents of sheet transactions by users, and stores information about sheets determined as false bills or unidentified bills as a result of another determination by the determining part in the storing part in association with information capable of identifying the users.

Claim 13 (Original): The sheet handling apparatus according to claim 12, including a storing chamber for storing the false bills or unidentified bills in the sheet handling apparatus without returning them to the users.

Claim 14-15 (Cancelled)

Claim 16 (Currently amended): A method of determining bills in a bill handling apparatus, comprising:

transporting bills to be deposited through a transport path to a determining part of the bill handling apparatus to perform determination;

a first determination mode in which denominations and truth of the bills are determined with first determination accuracy in the determining part;

setting second determination accuracy as higher bill determination accuracy than the first determination accuracy if a bill is determined as an unidentified bill that has a characteristic of a true bill but is out of a range of a permissible error as a result of determination in the first determination mode by changing the condition of a signal read accuracy by means of changing a range of an inputted voltage corresponding to the denomination of the unidentified bill;

a second determination mode in which a bill determined as the unidentified bill as a result of the first determination is determined again in the same determining part under the changed condition and determines again the truth of the unidentified bill by using the digital signal being obtained according to said changed condition set-at-the-second-determination-accuracy without being handled by a customer; and

processing bills determined as unidentified or false bills as a result of determination in the second determination mode separately from other bills.

Application No.: 10/763,391

Claim 17 (original): The method of determining bills according to claim 16, wherein the first determination mode includes the steps of:

detecting the characteristics of the bills by a detector; and
processing a signal from the detector to determine the truth of the bills.

Claim 18 (Cancelled)

Claim 19 (original): The method of determining bills according to claim 16, including the step of storing information about sheets determined as false bills or unidentified bills in the second determination mode in a storing part in association with information capable of identifying users of the bills.

Claim 20 (original): The method of determining bills according to claim 16, further including the step of having users confirm an inputted amount if a bill is determined as an unidentified bill as a result of determining the bill in the first determination mode.